

Finlay, Chris (2011) *Review: Chemistry of the Solar System by Katharina Lodders and Bruce Fegley, Jr.* Reviews: HEA Guide to Publications in the Physical Sciences, 22 (12). p. 10.

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<b>Title:</b>	Chemistry of the Solar System
<b>Authors:</b>	Katharina Lodders & Bruce Fegley, Jr
<b>Subject Area:</b>	Planetary Science
<b>Description:</b>	This text sets out the chemical make up of the solar system with links to historical and comparative information throughout.
<b>Publishers:</b>	RSC Publishing
<b>Date/Edition:</b>	2011
<b>ISBN:</b>	978-0-85404-128-2
<b>Level:</b>	Anyone with a background in chemistry
<b>Price:</b>	

This book is described as a ‘concise and factual account of the chemistry of the solar system’, and is aimed at anyone with an interest in planetary science and a background in chemistry. After completing this book I feel that, at the very least, an A-level or equivalent in chemistry is required to begin to adequately tackle the subject matter.

This is obviously a massive and potentially very complicated subject to deal with in any book. The authors have nicely structured the text so that the reader can easily find any area of particular interest without having to work through the entire book. For example, my own personal interest in the gas giants is dealt with in a specific chapter with its own introduction and links to further reading. Where applicable, basic definitions, and historical references are used to ensure understanding of the following content. The historical information particularly, e.g. details on data gathered from the lunar missions, helps the reader work through the content, and understand its relevance.

Chapter 1 deals with the make up of the solar system with subsequent chapters breaking down the details into more specific sections, e.g. The Bodies in the Inner Solar System, Meteorites, and The Solar Nebula etc. There are constant comparisons and directions to other chapters which enhances the relevance of the information and data presented. These comparisons, particularly across the planets helps keep the information in focus across the multiple chapters and by the end of the book I felt that the detail expected from a book with this title was extensively covered..

With the increase in popular interest in television programmes like *Wonders of the Universe* I can see a book titled ‘Chemistry of the Solar System’ gaining in popularity with the general public, it is certainly one of the reasons I asked to review this text in the first place. I have approached this book with a background in A-Level chemistry, with some small use of similar level chemistry in my working environment. I did find some of the detail challenging and some further reading/revision was required on my part to fully understand the details. I understand that someone with a more substantial background in chemistry would go through the substance of this book a lot quicker. However the content is presented in such a way that I actually wanted to find out more and understand the information on the page, not an easy task with detailed chemistry, and something the authors should be commended for. There are some very complicated diagrams used but the further reading suggestions and references from each chapter allowed me to understand and follow each section of interest. This probably pushes the book beyond the ‘popular science’ section in a book shop but the authors make it clear that this was not their intention for the book anyway.

As a summary I feel that this book is well structured, engaging and actively encourages the reader to expand on the content themselves. I believe that to fully work through the subject matter the reader would need a background in A-level/1<sup>st</sup>-year undergraduate level chemistry at the very least. Some competency in mathematics would also be an advantage. With the appropriate foreknowledge this book is a very interesting and informative read and I am certain that it would prove useful to planetary science/cosmos courses at undergraduate and postgraduate level.

### **Scores**

Academic Content	5
Usefulness to Student	4
Usefulness to Teacher	5
Meets Objectives	5
Accuracy	5

**My Details**

Dr Chris Finlay

Teaching Manager/ University Teacher

Faculty of Biomedical & Life Sciences

University of Glasgow

Glasgow

G12 8QQ